EFFECTIVENESS OF COMMUNICATION BOARD ON LEVEL OF SATISFACTION OF COMMUNICATION PATTERN AMONG PATIENT ON MECHANICAL VENTILATION IN SELECTED HOSPITAL IN PANIPAT, HARYANA

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Abstract

A communication act is a unit of communicative behaviour, nonverbal or verbal, that is directed from one conversational participant to another is an attempt to convey a message. Communication devices are available for more complex cases. Various option for patient with a tracheotomy tube include partial or total cough deflation and use of peaking value. It is important for nurses to correct communication needs, identify appropriate alternative communication strategies.

Keywords: *Communication, Satisfaction, Patient, Mechanical Ventilation, Hospital*

INTRODUCTION

A communication act is a unit of communicative behaviour, nonverbal or verbal, that is directed from one conversational participant to another is an attempt to convey a message.

Communication devices are available for more complex cases. Various option for patient with a tracheotomy tube include partial or total cough deflation and use of peaking value. It is important for nurses to correct communication needs, identify appropriate alternative communication strategies. Create a customised care plan with the patient, the patient's family and other team members, ensure that the care plan is variable and accessible to all staffing interacting with the patient and continue to collaborate with colleagues from all discipline to promote effective communication with non vocal patients.[4]

Mechanical ventilator is a method of mechanically assisting or replacing spontaneous breathing with machine known as ventilator. This procedure requires a tube to be introduced into the trachea for air to flow in and out, endotracheal tube passing through the vocal cords make speech impossible, thus dramatically altering the communication process. Some patient receiving mechanical ventilator experience an intensified need to communicate while their ability to do so is comprised as the endotracheal tube prevents speech, although the use of communication. Critically ill patients on mechanical ventilator in intensive care units often feel high level of frustration in communicating their needs to the care givers. Mechanically ventilated patients experience an intensified need to communicate. But it often compromised as their condition prevents speech. Lack of ability to communicate with care providers and family during periods of mechanical ventilation results in high risk situations and increases patient anxiety and frustration because life-threatening needs may not be met. Also, when patients cannot respond, communication between patient and caregivers is usually limited to short term information related to physical care in the form of yes/no question or commands.[5]

This study describes the communication pattern and level of satisfaction experienced by the mechanically ventilated patients and ascertains the helpfulness of methods used by health care practitioners to meet the communication needs of the mechanically ventilated patients. This study will add to the body of knowledge regarding communication in mechanically ventilated patients by reporting the effectiveness of communication board on communication pattern and level of satisfaction.[7]

Communication is the exchange and flow of information and ideas from one person to another. It involves sender transmitting an ideas, information, feeling to a receiver. Effective communication occurs only of the receiver understand the exact information or ideas that the sender intended to transmit. Many of the problems that occur in an organization all either direct result of people failing to conclusion can cause good plans to fail.[8]

Communication board are made by experts in the field of communication and the lack the contribution patients who have undergone communication difficulties due to mechanical ventilator, hence there is need to explore the patients needs and identify content that they want in communication board.

NEED FOR THE STUDY:
Communication difficulties are too often devasting in health care setting and it can often create huge barriers between patients and health care staff
Mechanically ventilated patients are unable to express their feelings and needs through verbal communication because the endotracheal tubes running through their vocal cords make speech impossible, contributing to their frustration and anxiety. As a result, the caregiver is forced to interpret the patient's non-verbal communication such as mouthing, gesturing, nodding and writing which can be difficult for the critically ill patient. Many patient die in pain without the ability to fully express their needs, wishes about end of life care, or final messages to loved ones and the intubated patients, those who are the most severely ill have the greatest anger about the inability to speak.[14]

PROBLEM STATEMENT
A study to assess the effectiveness of communication board on level of satisfaction of communication pattern among patients on mechanical ventilator in selected hospital, Panipat

OBJECTIVES OF THE STUDY
1. To assess the post-test level of satisfaction of communication pattern among patient on mechanical ventilator in experimental and control group.
2. To evaluate effectiveness of communication board on level of satisfaction of communication pattern among patients on mechanical ventilator in experimental and control group.
3. To associate the post test level of satisfaction in patient on mechanical ventilator with their selected demographic variables in experimental and control group.

HYPOTHESIS
H1-There will be a significant difference between the level of satisfaction in meeting the basic needs of patients on ventilator in experimental and control group at p<0.05 level.
H2- There will be a significant association between the level of satisfaction in meeting the basic

needs of patients on ventilator with their selected demographic variables in experimental and control group at p<0.05 level.

REVIEW OF LITERATURE
The related literature reviewed is presented as follows:-
Section A: Review of literature related to communication pattern
Section B: Review of literature related to patients on mechanical ventilator
Section C: Review of literature related to effectiveness of communication board on mechanically ventilated patients.

METHODOLOGY
Methodology deals with the research approach, research design, setting of the study, population, criteria of selection of sample, sample size, sampling technique, description of tool, scoring procedure, pilot study, data collection procedure, plan for data analysis, and protection of human rights.

RESEARCH APPROACH:
Polit and Hungler, (2004) defined the research approach as "general set of orderly discipline procedure used to acquire information."
The research approach used for this study will be quantitative approach to assess the effectiveness of communication board on level of satisfaction in meeting the basic needs of the patients on ventilator admitted in ICU.

RESEARCH DESIGN:
Polit and Hungler, (2004) defined research design as "overall plan for addressing a research questions, including specification for enhancing the study integrity."
A research design is quasi experimental research design, having post-test only.

> **Research Approach**
> Quantitative evaluative approach
> **Research Design**
> Quasi experimental research design having posttest only

> **Population**
> Patients who are on mechanical ventilator at Panipat

> **Setting**
> Experimental group - Dr. Prem Hospital,
> Control Group   - CygnusHospital

> **Sample and Sample size**
> Patients on ventilator in selected hospitals and meeting inclusion criteria
> Experimental group   : n = 30
> Control group   : n = 30

Universe International Journal of Interdisciplinary Research
(Peer Reviewed Refereed Journal)

Sampling technique
Non-probability convenience sampling

Data collection

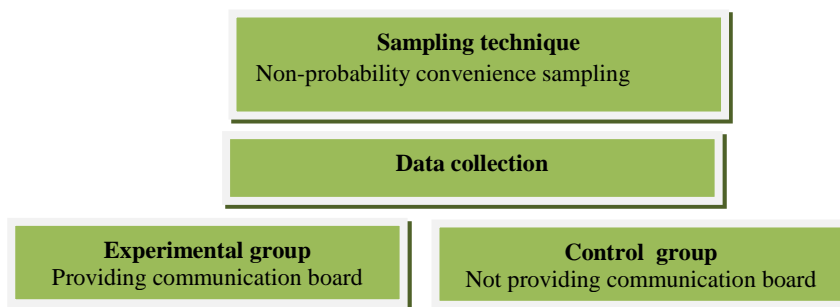| Experimental group	Control group
Providing communication board	Not providing communication board

Figure No: 3.1 The schematic representation of research methodology

SAMPLING CRITERIA:
INCLUSION CRITERIA:-
- Patients who can understand Hindi language.
- Patients with normal mental status.
- Patients who are conscious but are under mechanical ventilator.
- Both evasive and invasive patients.

EXCLUSION CRITERIA:-
- Patients who are unconsciousness.
- Patients with immobility of upper limbs.
- Patients who are not willing to participate.

TOOLS FOR DATA COLLECTION
1. **Demographic Variables: -** It is used to obtain the **demographic data** of the clients. It consisted of demographic variables of patients on mechanical ventilator that includes age, gender, educational status, occupation, and diagnosis.
2. **Rating Scale To Assess the Level of Satisfaction In Meeting The Basic Need Of The Patient -** It is used to assess the level of satisfaction in meeting the basic needs of patients on mechanical ventilator.

Level of Satisfaction	Score
Highly Satisfied	105-82
Satisfied	81-58
Not Satisfied	57-35

DATA ANALYSIS & INTERPRETATION
This chapter represents the analysis of collected data and interpretation of the data according to the objectives of the study. The collected data were analysed with the help of SPSS – version 20. The detailed analyses of the study were presented under various sections according to the objectives

Section:-A: Frequency and Percentage Distribution of Subjects

Table – 4.1: Frequency and Percentage Distribution of Subjects According to Socio – Demographic Variables among Subjects in Experimental and Control Group.

(n = 60)

S.	Demographic Variables	Experimental	Control Group

No			Group			
			f	%	f	%
1.		**Age (Years)**				
	a.	18 – 37	11	36.2	8	26.7
	b.	38 – 57	13	41.9	13	43.3
	c.	58 – 57	6	21.9	9	30
2.		**Gender**				
	a.	Male	16	54.8	15	50
	b.	Female	14	45.2	15	50
3.		**Education**				
	a.	Secondary	16	53.3	16	53.3
	b.	Higher Secondary	14	46.7	14	46.7
	c.	Graduate & Above	0	0	0	0
4.		**Occupation**				
	a.	Employed	15	50	17	56.6
	b.	Unemployed	15	50	13	43.4
5.		**Diagnosis**				
	a.	Liver Disease	3	3.3	5	16.6
	b.	Road Traffic Accident	10	33.3	7	23.3
	c.	Poisoning	3	3.3	6	20
	d.	Medical	6	20	3	3.3
	e.	Surgical	5	16.6	5	16.6
	f.	Others	3	3.3	4	13.3

The above table shows the Frequency and Percentage Distribution of Subjects According to Socio – Demographic Variables among Subjects in Experimental and Control Group.

Section:-B: Frequency and Percentage Distribution of Subjects According to Level of Satisfaction of Communication Pattern

Table – 4.2: Frequency and Percentage Distribution of Subjects According to Level of Satisfaction of Communication Pattern in Experimental Group

(n = 30)

S. No	Level of Satisfaction	Frequency	Percentage (%)
1.	Highly Satisfied (82 – 105)	10	13.3
2.	Satisfied (58 – 81)	17	56.4
3.	Not Satisfied (35 – 57)	3	3.3

From table – IV we understood the level of satisfaction of Satisfaction of Communication Pattern among subjects in experimental group. Majority of the subjects 17 (56.4%) were satisfied with the use of communication board. Subjects with high satisfaction were 10 (13.3%). Few subjects 3 (3.3%) were not satisfied with the use of communication board.
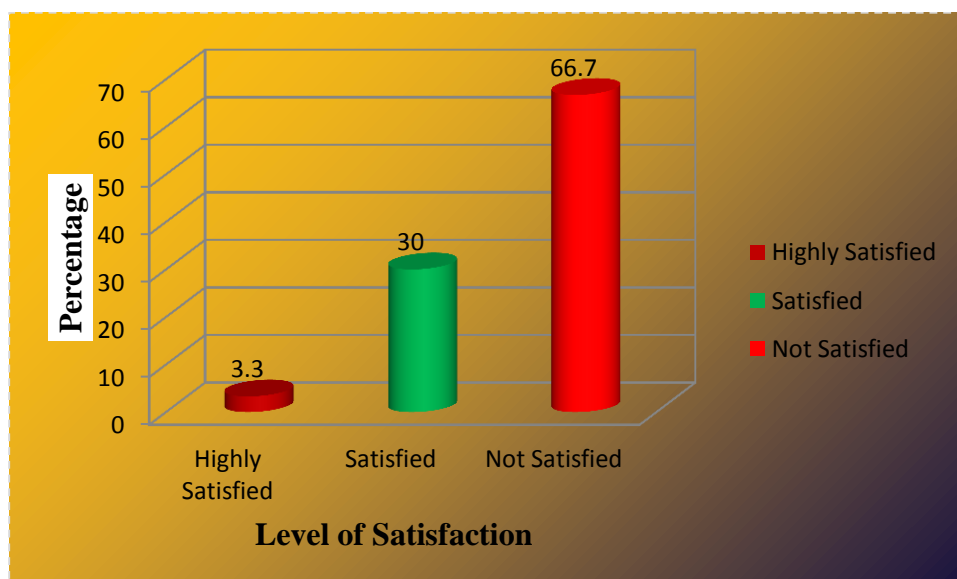
Figure: 4.6Percentage Distribution of Subjects According to Level of Satisfaction of Communication Pattern in Experimental Group

Table –4.3: Frequency and Percentage Distribution of Subjects According to to Level of Satisfaction of Communication Pattern in Control Group

(n = 30)

S. No	Level of Satisfaction	Frequency	Percentage (%)
1.	Highly Satisfied (82 – 105)	1	3.3
2.	Satisfied (58 – 81)	9	30
3.	Not Satisfied (35 – 57)	20	66.7

Table –4.3 shows the percentage distribution of subjects in control group regarding satisfaction of communication pattern. Majority of the subjects 20 (66.7%) were not satisfied with the communication pattern. Subjects who were satisfied in the current communication pattern were 9 (30%). Only subject in the control group was highly satisfied with the current communication pattern in the control group.

**Figure:4.7 Percentage Distribution of Subjects According to Level of Satisfaction
of Communication Pattern in Control Group**

**Section:-C: Effectiveness of Communication on Level of Satisfaction of Communication
Pattern**.

**Table – 4.4: Mean, Mean Difference, Standard Deviation and Independent't' test
value of subjects between experimental and control group.**

(n = 60)

Group	Post-Test Mean	Mean Difference	Standard Deviation	Independent 't' test	Level of Significance
Experimental Group	74.87		13.88		
		21.3		6.350	0.000
Control Group	53.57		12.03	(df = 58)	Significant

*Significant (p<0.05), Table Value=2.01

The above table shows the Mean, Mean Difference, Standard Deviation and Independent't' test value of subjects between experimental and control group.

The post-test mean value of experimental group subjects were 74.87 (SD $\leq$13.88) similarly in control group the post-test mean score was 53.57 (SD $\leq$ 12.03) The mean difference score was 21.3. the independent 't' test score was 6.350 for the degree of freedom 58. It was statistically significant at 'P' value < than 0.05.

Hence the researcher rejects the null hypothesis and accepts the alternate hypothesis.

**Section:-D: Level of Association between Level of Satisfaction among subjects with selected
Socio-demographic variables in Experimental and Control Group**

**Table – 4.5: Level of Association between Level of Satisfaction among subjects with selected
Socio-demographic variables in Experimental Group**

(n = 30)

S. No	Demographic Variables	Level of Satisfaction			χ2 value	'P' Value
		High	Satisfied	No		
1.	**Age (Years)**					
	a. 18 – 37	3	7	1		
	b. 38 – 57	5	7	1	0.728	0.948
	c. 58 – 57	2	3	1	df = 4	NS
2.	**Gender**					
	a. Male	5	9	2	0.260	0.878
	b. Female	5	8	1	df = 2	NS
3.	**Education**					
	a. Secondary	5	9	0	2.939	0.230
	b. Higher Secondary	5	8	3	df = 2	NS
4.	**Occupation**					
	a. Employed	5	9	1	0.392	0.822
	b. Unemployed	5	8	2	df = 2	NS
5.	**Diagnosis**					
	a. Liver Disease	1	2	0		
	b. Road Traffic Accident	2	7	1		
	c. Poisoning	2	1	0	8.149	0.614

d. Medical	2	3	1	df = 10	NS
e. Surgical	3	1	1		
f. Others	0	3	0		

*Significant (p<0.05)

The above table shows that there was a significant association between the level of pain among subjects with selected socio demographic variables in an experimental group at p<0.05 level. In the experimental group there was no significant association with the selected demographic variables. Hence research hypothesis H_2 is rejected

Table – 4.6: Level of Association between Level of Satisfaction among subjects with selected Socio-demographic variables in Control Group

(n = 30)

S. No	Demographic Variables	Level of Satisfaction			χ^2 value	'P' Value
		High	Satisfied	No		
1.	**Age (Years)**					
	d. 18 – 37	0	4	4		
	e. 38 – 57	1	2	10	3.872	0.424
	f. 58 – 57	0	3	6	df = 4	NS
2.	**Gender**					
	c. Male	0	4	11	1.311	0.519
	d. Female	1	5	9	df = 2	NS
3.	**Education**					
	c. Secondary	0	5	11	1.183	0.553
	d. Higher Secondary	1	4	9	df = 2	NS
4.	**Occupation**					
	c. Employed	1	5	11	0.792	0.673
	d. Unemployed	0	4	9	df = 2	NS
5.	**Diagnosis**					
	g. Liver Disease	0	2	3		
	h. Road Traffic Accident	0	3	4		
	i. Poisoning	0	1	5	8.631	0.567
	j. Medical	0	1	2	df = 10	NS
	k. Surgical	1	0	4		
	l. Others	0	2	2		

*Significant (p<0.05)

The above table shows that there was a significant association between the level of pain among subjects with selected socio demographic variables in an experimental group at p<0.05 level. In the control group there was no significant association with the selected demographic variables. Hence research hypothesis H_2 is rejected.

DISCUSSION

The chapter deals with the discussion of the data analyzed based on the objectives and hypothesis of the study. The problem statement "A study to assess the effectiveness of communication board on level of satisfaction of communication pattern among patients on mechanical ventilator in selected hospital, Panipat." The discussion was based on the objective and hypothesis mentioned in the study.

Description of demographic profile

The demographic profile in experimental group, 13(41.9%) of them belongs to 38-57 of age group, 16(54.8%) were males, 16(53.3%) were having secondary level of education, equal number of subjects 15(50%) were employed & unemployed and 10(33.3%) were with road traffic accident.

In control group, 13(43.3%) of them belongs to 38-57 of age group, equal number of subjects 15(50%) were males and females, 16(53.3%) were having secondary level of education, 17(56.6%) were employed and 7(23.3%) were with road traffic accident.

The first objective was to assess the post test level of satisfaction of communication pattern among patients on mechanical ventilator in experimental and control group.

During post test in experiment group 10(13.3%) were highly satisfied, 17(56.4%) were satisfied and 3(3.3%) were not satisfied.

In control group 1(3.3%) were highly satisfied, 9(30%) were satisfied and 20(66.7%) were not satisfied.

The second objective was to evaluate effectiveness of communication board on level of satisfaction of communication pattern among patients on mechanical ventilator in experimental and control group.

In post test, the experimental group showed a mean value of 74.87 with standard deviation of 13.88 and the control group showed a mean value of 53.57 with standard deviation of 12.03. The calculated unpaired 't' test value 6.350 for degree of freedom was 58 which was statistically significant at the 'P' value 0.00

This showed a significant difference in the post test level of satisfaction between experimental and control group. It shows that communication board was effective on level of satisfaction in meeting the basic needs of patient on mechanical ventilator. Hence the hypothesis (H_1) was accepted.

The third objective was to associate the post test level of satisfaction in patient on mechanical ventilator with their demographic variables in experimental and control group.

It shows that, in experimental group the calculated value of demographic variables such as age, gender, educational, occupation, diagnosis of the patient is lesser than the 'P' value which indicates there was no significance association with level of pain and the demographic variables.

In control group the calculated value of demographic variables such as age, gender, educational, occupation, diagnosis of the patient is lesser than the 'P' value which indicates there was no significance association with level of pain and the demographic variables.

SUMMARY, CONCLUSION, NURSING IMPLICATION AND RECOMMENDATION

This chapter deals with the summary of the study and conclusion. It clarifies nursing implication for nursing practice, recommendations for further research in the field.

SUMMARY

The study is to assess the effectiveness of communication based on level of satisfaction of communication pattern among patients on mechanical ventilator in selected hospital, Panipat. The design of the study was quasi experimental post test only design. The conceptual framework was based on Kings Goal attainment theory.

The sample size of the study was 60. The experimental and control group consisted of 30 subjects each. Non probability sampling was used to select the patients. Data was collected for a period of 4

weeks. Investigator visited patients who fulfilled inclusion criteria and collected relevant data based on the objectives and data was analyzed by using inferential statistics.

CONCLUSION

This study was done to evaluate the effectiveness of communication board on level of satisfaction of communication pattern among patients on mechanical ventilator in selected hospital, Panipat. The result of this study showed that the communication board was effective among mechanically ventilated patients on level of satisfaction. There is a significant difference between the level of satisfaction in meeting the basic needs of patients on mechanical ventilator in experimental group.

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